



**Table C-1. General List of Applicable Activities for Tier I– Non-Structural BMPs**

Type of Activity	Activity Name	Description	Projects Applicable to Dischargers								
			Caltrans		City of San Diego	City of La Mesa	City of Lemon Grove	County		Navy	Port
Regulatory/ Legislative	Basin Plan Beneficial Use Designation Correction	Identify and delete obsolete/inaccurate Beneficial Use designations in Basin Plan to allow for concentration of efforts on achievable BU designation restoration and protection.	•		•	•	•	•		•	•
	Enhanced Development Standards	Review SUSMP and Discharger design standards for new developments, redevelopments, roadway improvements, and parking lots for opportunities to incorporate LID standards, where applicable.	•		•	•	•	•		•	•
	Code Modification	Review and update ordinances to promote water quality–friendly products, behaviors, LID techniques, and water reuse (grey water, purple pipe, etc). Code Modification may be a stand alone Activity, or a component of another watershed activity.			•	•	•	•			•
	Product Substitution	Identify product use that contributes to pollutant loading and water quality degradation. Coordinate with appropriate industry groups to implement voluntary movement or legislation towards use of substitute products that are less harmful to water quality (e.g. evaluate alternative types of fencing, or lobbying for non-copper material to be used in break pads, etc.)	•		•	•	•	•		•	•
Outreach/ Education	Watershed Advertisement	Purchase ad space/time (e.g., billboards, transit shelters, radio, television, and print) to broadcast messages promoting specific water quality–friendly behaviors.	•		•	•	•	•			
	Targeted Outreach Materials	Develop and strategically distribute pollutant-, source-, activity-, and audience-specific outreach materials (some guidance available in <i>Basic BMPs</i> matrix in <b>Tool D, Table D-2</b> ).	•		•	•	•	•			•
	Targeted Behavioral Training	Develop pollutant-, source-, and activity-specific training materials (some guidance available in <i>Basic BMPs</i> matrix in <b>Tool D, Table D-2</b> ). Conduct training sessions where information is taught and distributed; training may include simulations, facilities tours, and other means to demonstrate water-quality-friendly behaviors.	•		•	•	•	•		•	•
	LID Education	Conduct LID education and training for jurisdictional authorities responsible for development and planning. Goal would be to identify opportunities to incorporate LID techniques into maintenance and capital improvement projects and then obtain authority to incorporate LID.	•		•	•	•	•		•	•
	LID Construction Outreach	Inform public of water-quality-related capital improvement projects to be constructed within jurisdiction. Combine Construction Outreach with Watershed Advertisement, Training and other efforts to promote specific water-quality-friendly behaviors.	•		•	•	•	•			•
	LID Contractor Outreach	Conduct LID outreach, education, and training to construction contractors. Participation in LID Contractor Outreach could be incorporated into the construction Bid process and combined with other Targeted efforts for outreach and education. As the program advances, jurisdictions may make experience in LID a criterion in the jurisdictional contractor approval process.			•	•	•	•			•
	Community-Based Social Marketing Pilots	Select specific business and residential behaviors that are detrimental to water quality, and identify factors sustaining those behaviors (see <i>Basic BMPs</i> in <b>Tool D, Table D-2</b> ). Develop pilot education and outreach programs that specifically address those factors to determine which programs are most effective in eliciting behavioral changes for broader implementation.			•	•	•			•	•
Enforcement	Targeted Facility Inspections (with education/outreach)	Identify likely pollutant source facilities based on geospatial analyses of facility locations and monitoring data to focus facility inspections. Tailor education/outreach efforts for problem facilities and distribute. Recommend or mandate implementation of <i>Basic BMPs</i> listed in <b>Tool D, Table D-2</b> .			•	•	•				•

Type of Activity	Activity Name	Description	Projects Applicable to Dischargers								<div><div>1</div><div>BMPs</div></div>
			Caltrans		City of San Diego	City of La Mesa	City of Lemon Grove	County		Navy	
	Targeted Enforcement	Focus enforcement efforts by some criteria (e.g., land use, facility type, activity, geography, and audience) to address identified high-priority water problems. Review facilities for <i>Basic BMPs</i> listed in <b>Tool D, Table D-2</b> .			•	•	•	•	•	•	
	Inspection-Generated Enforcement	Identify likely pollutant source facilities based on geospatial analyses of facility locations and monitoring data to focus storm water-associated inspections and enforcement on problem facilities. Review facilities for <i>Basic BMPs</i> listed in <b>Tool D, Table D-2</b> .			•	•	•	•			
	Enforcement Referrals	Identify problem facilities and activities exempt from Dischargers’ code enforcement/prosecution (i.e., upstream of jurisdictional area or exempt from code). Refer to appropriate agency or jurisdiction for corrective action.			•	•	•				
Special Pilot Studies	Targeted Mobile Household Waste Collection Centers Pilot	Conduct a two-year cost-benefit analysis of implementing targeted, mobile household waste collection centers.			•	•	•			•	
	Targeted Storm Drain Maintenance Pilot	Determine optimum frequency and scheduling of storm drain cleaning.	•		•	•	•	•	•	•	
	Doggie Bag Dispenser Installation Pilot	Identify areas with pet waste problems, and install dispensers / promote pet waste collection to reduce bacterial loading.			•	•	•	•			



Table C-2. General List of Applicable Activities for Tier II – Structural BMPs

Type of Activity	Activity Name	Description	Projects Applicable to Dischargers						
			Caltrans	City of San Diego	City of La Mesa	City of Lemon Grove	County of San Diego	Navy	Port
Special Studies	Pollutant Source ID and other Special Studies	Conduct Permit required and other source identification studies of priority pollutants at priority sources to determine actually loadings. Implement iterative evaluation process and planning strategy.	•	•	•	•	•	•	•
	Pollutograph Studies	Collect and analyze storm water samples to develop and analyze pollutographs to implement iterative evaluation process and planning strategy. Also evaluate design storm criteria and other design factors that impact concentration-based pollutant loads.	•	•	•	•	•	•	•
	Master Plan	Review existing soil, sediment, and infrastructure conditions, Capital Improvements schedule and TMDL implementation plan/schedule (Appendix B). Integrate into a Master Plan for jurisdiction. This effort may be incorporated into <b>Tier I LID Education and Code Modification activities</b> .	•	•	•	•	•	•	•
Targeted Source Control BMPs	Shoreline Kelp Removal	Identify shorelines where tractor rakes/sweepers have difficulty accessing. Implement alternative kelp removal techniques to reduce bacteria host sites and bacterial loading.		•				•	
	Trash/Debris Cleanup	Sponsor local organizations’ cleanup efforts to remove litter from public areas and waterways before being washed out by runoff into Chollas Creek.	•	•	•	•	•	•	•
	Homeless Encampment Removal	Sponsor local organizations’ efforts to identify and eradicate illegal human settlement camps along Chollas Creek to reduce bacterial, metals, and trash loading.	•	•	•	•	•	•	•
Targeted Aggressive Street Sweeping	Street Sweeping	Use specialized street sweepers and/or increase street-sweeping efforts in areas with high volumes of vehicular and human traffic/activity to reduce the accumulation of metals and trash before they are washed into the MS4 and local waterbodies.	•	•	•	•	•	•	•
Runoff Reduction/ Incentive Program	Residential Landscaping Retrofit Pilot	Retrofit residential landscaping system using latest technology and using BMPs to reduce water consumption and runoff. Model water use before and after implementation to estimate future changes in water consumption and runoff when implementing similar retrofits.		•	•	•			
	Artificial Turf Pilot	Install artificial turf in pocket parks or other small landscaped areas. Characterize load contribution before and after implementation, and track water, fertilizer, and pesticide use. Dischargers are advised to tie these efforts into water conservation efforts.		•	•	•	•		
	Smart Irrigation Control Incentive Program – Residential Program	Disseminate information and promote installation of devices in targeted residential areas through rebates or giveaways.		•	•	•			
	Smart Irrigation Control Incentive Program – Commercial Program	Disseminate information and promote installation of devices in targeted commercial and/or industrial areas through rebates or giveaways.		•	•	•	•		
	Downspout Redirection Incentive Program – Residential Program	Disseminate information and promote redirection of downspouts to landscaped areas for infiltration in targeted residential areas through rebates or giveaways.		•	•	•			
	Downspout Redirection Incentive Program – Commercial Program	Disseminate information and promote redirection of downspouts to landscaped areas for infiltration in targeted commercial and/or industrial areas through rebates or giveaways.		•	•	•	•		•
	Rain Barrel Incentive Program – Municipal/Residential	Disseminate information and promote installation of rainwater collection containers that harvest rainwater for landscaping irrigation and other non-potable uses. Implementation of this program will begin on City-owned properties where signage and other outreach information will be made available to the local community. This phase will be followed by a pilot program in a targeted residential area and will include incentives like rebates or giveaways.		•	•	•			



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			Caltrans	City of San Diego	City of La Mesa	City of Lemon Grove	County of San Diego	Navy	Port
	Roof Rainwater Harvesting/Reuse Incentive Program	Disseminate information to promote installation of roof and plumbing systems to capture rainwater for non-potable reuse within dwellings. Identify municipal facilities to pilot and study such systems.		•	•	•	•		
Inlet Trash/Debris Segregation BMP	Inlet Trash/Debris Segregation BMP	In conjunction with targeted street sweeping, install inlet devices to capture trash/debris prior to conveyance into local waterbodies. Due to long-term high maintenance issues, this BMP will first be piloted with aggressive street sweeping to assess the maintenance requirements compared to their trash removal effectiveness. The use of a multi-catchment /drainage area approach to trash removal (e.g., hydrodynamic separator at the MS4 outfall) may need to be used as part of a treatment train <b>Tier III</b> approach.	•	•	•	•	•	•	•
Low Impact Development Pollution Control BMPs	Green Street – Infiltration	Replace sidewalks and asphalt paving with porous concrete sidewalks and porous asphalt paving. Install bioretention areas along residential right of ways in high pollutant loading areas. These BMPs will infiltrate design storm or first-flush urban runoff, thereby reducing runoff volume and pollutant loading.		•	•	•			
	Green Street – Filtration	This Green Street option is used where geotechnical conditions do not favor infiltration and where underground utilities allow. Porous concrete and asphalt is used to replace impervious sidewalks and streets. Runoff is filtered through an amended soil layer below the aggregate subbase of the porous pavement. Underdrains in/below the amended soil layer direct water to the MS4. Bioretention planters also capture urban runoff. A deeper amended soil layer in these areas allows larger plants to grow, and the plants treat/remove storm water through evapotranspiration. For projects where reclaimed water is not available for irrigation or maintenance issues have been identified, these bioretention areas can alternatively use amended soil with a decorative river rock/cobble surface. Depending on site conditions, addition gravel storage layers and underdrains to the MS4 may be needed.		•	•	•			
	Green Mall – Infiltration	Replace sidewalks and asphalt paving with porous concrete sidewalks and porous asphalt paving. Install planter boxes along commercial/industrial right-of-ways in high pollutant loading areas. These BMPs will infiltrate design storm or first-flush urban runoff, thereby reducing runoff volume and pollutant loading.		•	•	•	•		
	Green Mall – Filtration	This Green Mall option is used where geotechnical conditions do not favor infiltration and where underground utilities allow. Pollutants are removed by filtering runoff through amended soil layers below a section of porous pavement or capturing runoff in bioretention areas (see filtration-type Green Street description). Additional runoff and pollutant load reduction techniques include collecting roof runoff into planter boxes and cisterns/rain barrels to reuse storm water and Green Roof technology.		•	•	•	•		
	Green Lot – Infiltration	Replace sidewalks and asphalt paving with porous concrete sidewalks and porous asphalt paving. Install planter boxes along in high pollutant loading areas. These BMPs will infiltrate design storm or first-flush urban runoff, thereby reducing runoff volume and pollutant loading.		•	•	•	•	•	•
	Green Lot – Filtration	This Green Lot option is used where geotechnical conditions do not favor infiltration and where underground utilities allow. The filtration Green Lot is similar in design to the filtration Green Street concept, but applied to large parking lot areas.		•	•	•	•	•	•
	Infiltration Vault/Pit Installation	Install underground vaults/pits with associated headworks to capture and store urban runoff and allow it to infiltrate the ground.	•	•	•	•	•	•	•
	Integrated Water Reuse Project	Implement projects that integrate the reuse of storm water to meet increasing water supply needs of region into a <b>Tier II LID</b> project, a <b>Tier III sustainable canyons</b> project, etc.		•	•	•	•		

Table C-3. General List of Applicable Activities for Tier III – Restoration and Treatment BMPs

Type of Activity	Activity Name	Description	Projects Applicable to Dischargers						
			Caltrans	City of San Diego	City of La Mesa	City of Lemon Grove	County of San Diego	Navy	Port
Targeted Dry Weather Diversions	Dry Weather Diversion	Install inlet system diversion structure to direct dry weather runoff into sewage system for treatment instead of directly discharging flows into receiving waterbodies.		•	•	•	•	•	•
Bacteria Treatment BMPs	Bacteria Treatment BMP	Install Bacteria Treatment BMPs during pilot study. These structural BMPs are currently designed for low flow conditions and therefore must be used as part of an integrated approach with upstream <b>Tier I</b> and <b>Tier II</b> BMPs. The effectiveness of this BMP on larger storm flows is not proven and would require pilot testing during Phase I.	•	•	•	•	•	•	•
Erosion and Sediment Controls/ Hydromodification BMPs	Hydro-Modification Management BMP	Determine priority areas for erosion and sediment control by estimating the sediment loading for a developed site as if were undeveloped open-space. Compare this loading to the existing load reduction requirements and requirements to reduce hydro-modification of downstream channels.	•	•	•	•	•	•	•
	Erosion/Sediment Control BMP	Identify specific sites with erosion/sediment problems. Engineer and construct site-specific structural solutions that reduce runoff flow velocity and promote suspended solid settling.		•	•	•	•		
	Detention Basin Operation and Maintenance (O&M) Sponsorship/Endowment	Coordinate with non-profit stakeholders to establish endowments to sponsor and fund the operation and maintenance of sediment control detention basins.	•	•	•	•	•	•	•
Restoration	Creek/Habitat Restoration	Restore creeks and associated habitat to improve natural filtration capabilities. This project type includes removing existing concrete channels and re-establishing native substrate and vegetation.	•	•	•	•	•	•	•
Sustainable Treatment Approaches	Sustainable Canyons Program	Identify and develop a master plan for canyon-associated improvements, including storm water load reductions/ compliance, habitat restoration and enhancement, and infrastructure improvements.		•	•	•	•		
	Sustainable Canyons – Upgrade to MS4 Outfall	Upgrade existing outfalls that discharge into the canyons to address issues like erosion, deferred maintenance, and poor water quality. Upgrades include extending the outfall to the base of the slope, improving outfall stabilization, controlling peak flow and peak velocity, and implementing BMPs that remove gross solids and sediments (e.g., hydrodynamic separators or vaults with baffles).		•	•	•	•		
	Sustainable Canyons – Treatment Train/Extension of MS4	In addition to an existing MS4 outfall upgrade project, a treatment train is attached to the MS4 to provide additional treatment for dissolved metals and bacteria. Treatment trains have a low through-put capacity; therefore, this type of project must be integrated with an upstream <b>Tier I</b> and <b>Tier II</b> BMP program that reduces runoff volume and pollutant loading.		•	•	•			
	Sustainable Canyons – Offline Natural Treatment System (NTS)/ Restoration	In addition to an existing MS4 outfall upgrade project, a NTS is installed offline from the main canyon channel. The NTS is designed to provide additional treatment for dissolved metals and bacteria for first flush and design storm flows; larger flows are diverted. A NTS has a low through-put capacity; therefore, this type of project must be integrated with upstream <b>Tier I</b> and <b>Tier II</b> BMPs that reduce runoff volume and pollutant loading.		•	•	•			
	Sustainable Canyons – Inline NTS/ Restoration	In addition to an existing MS4 outfall upgrade project, a NTS is installed to treat a design storm flow in the canyon channel above a defined level. The NTS functions as a natural floodway that holds and reduces peak flows, retains sediment, and controls downstream erosion. NTS projects should be coordinated with slope stabilization and channel restoration projects.		•	•	•			

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			Caltrans	City of San Diego	City of La Mesa	City of Lemon Grove	County of San Diego	Navy	Port
	Sustainable Canyons – Channel Stabilization/Grade Controls/Restoration	Reduce flow velocities and downstream erosion in the canyon using grade controls and stabilization techniques (e.g., toe of slope reinforcement structures and/or channel bank bioengineering). These projects should be coordinated with inline NTS projects.		•	•	•	•		
	Sustainable Canyons – Trail and Utility Access Enhancement	Reduce sedimentation and improve public access/education by enhancing existing and planned access roads and trails. Projects include using sustainable materials, installing erosion controls and culvert channel crossings, and stabilizing inlets and outlets of existing culvert crossings. Install security features to address illegal dumping and unauthorized vehicle and off road vehicle access.		•	•	•			
Integrated Multi-Treatment Train System *	Limited Low-Flow Storm Drain Inlet Multi-Pollutant Treatment System	Install inlet devices to remove gross solids and filter other pollutants (e.g., oil and bacteria) from low-flow runoff before discharge into the MS4. These systems have a low treatment capacity (typically less than 0.3 cfs flow), so systems should be implemented in conjunction with runoff reduction <b>Green Street, Green Mall, and Green Lot BMPs.</b>	•	•	•	•	•	•	•
	Small-Scale Storm Flow Storage and Multi-Pollutant Treatment System	Install devices to capture and temporarily store storm flows, to settle pollutants, and to treat/filter water before discharge to the MS4.	•	•	•	•	•	•	•
	Large-Scale Storm Flow Storm and Multi-Pollutant Treatment System	Construct a comprehensive, large-scale system to capture and temporarily store large amounts of storm flows, to settle pollutants, and to treat/filter water before discharge to the MS4.	•	•	•	•	•	•	•

\* Multi-Treatment Train projects should only be implemented after implementation of sustainable treatment approaches and restoration activities.